

20060117.ba v03\_n882.bam.20060117

>From ???@??? Tue Jan 17 20:13:49 2006 -0600  
Date: Tue, 17 Jan 2006 20:13:10 CST  
From: Old Tube Radios <boatanchors@theporch.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: BOATANCHORS digest 3882  
Message-Id: <20060118020953.CDC394095F@srvr1.theporch.com>

BOATANCHORS Digest 3882

Topics covered in this issue include:

- 1) oscillator using tubes for morse practice  
by Jason Buchanan <jsb@digistar.com>
- 2) Re: Repair philosophy  
by "Marty Reynolds' debris field" <polepeeg@ba-watch.org>
- 3) Re: Repair philosophy  
by spr@earthlink.net
- 4) RE: Flat Metal Strap, Circular?  
by "Joe Curry" <jjcurry@sbcglobal.net>
- 5) Re: Repair philosophy  
by Henry van Cleef <vancleef@eskimo.com>
- 6) Re: postage stamp mica caps-Deja-vu!  
by "Arden Allen" <gumbear@pacbell.net>
- 7) Re: Repair philosophy  
by "Arden Allen" <gumbear@pacbell.net>
- 8) Re: Repair philosophy  
by David Stinson <arc5@ix.netcom.com>
- 9) ADMINISTRIVIA: Changing Email Addresses  
by listown@nanniandjack.com (Mail List Owner)
- 10) update on RCA 7K1-  
by wb3fau@att.net
- 11) Re: Repair philosophy  
by spr@earthlink.net
- 12) Re: update on RCA 7K1-  
by Kim Herron <kherron@voyager.net>
- 13) Re: update on RCA 7K1-  
by spr@earthlink.net
- 14) Re: Repair philosophy  
by "Arden Allen" <gumbear@pacbell.net>

---

Message-ID: <43CC1C42.6040803@digistar.com>  
Date: Mon, 16 Jan 2006 17:20:50 -0500  
From: Jason Buchanan <jsb@digistar.com>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>

Subject: oscillator using tubes for morse practice  
Content-Type: text/plain; charset=ISO-8859-1; format=flowed  
Content-Transfer-Encoding: 7bit

hi,

I'm interested in building a CW practice oscillator for the purpose of getting my bug fist back into shape but I want a tube sound like i'm accustomed to hearing from my Drake 4 Line and not a tinny transistorized sound like so many kits i've found. I looked in my ARRL handbooks but '66 is as far back as I have and the practice set in that year's book is a transistorized squawker.

A nice, clear and click-less CW note with warm tube harmonics is what i'm after.

thanks!

Jason

--

73 Jason N1SU

Jason Buchanan - Boxboro, MA

Website: <http://n1su.com/>

-----  
Message-ID: <32908.66.147.42.218.1137450088.squirrel@fracas.netboobie.org>  
Date: Mon, 16 Jan 2006 17:21:28 -0500 (EST)  
Subject: Re: Repair philosophy  
From: "Marty Reynolds' debris field" <polepeeg@ba-watch.org>  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: "Old Tube Radios" <boatanchors@theporch.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=iso-8859-1  
Content-Transfer-Encoding: 8bit

> Folks,

>

> Here's how I do it. When first I get an old radio, I fix the line cord  
> well enough not to burn anything down. Then I pull the rectifier tube and  
> bring it up on a Variac, watching the AC line current.

Scott that's where we philosophically diverge.

I pull all the tubes &, if xfrmr-powered, series a bulb w. line cord  
& slam the juice toit. If no light, next step

Put eternal current-limited B+ to ckt. & see if electrolytics re-form. If twist-loks, they usually do. Then ramble thru ckt. looking for leaky screen bypasses & audio couplers.

Next, less B+ on AVC line & same stuff.

This way you can have some entertainment set going correctly in short order.

Oh yeah - current limiting B+ is just putting, say, 20K 10W in series w, a, perhaps, that 400V external supply.

Marty

-----  
Message-ID: <22829885.1137456598819.JavaMail.root@elwamui-cypress.atl.sa.earthlink.net>  
Date: Mon, 16 Jan 2006 19:09:58 -0500 (EST)  
From: spr@earthlink.net  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Repair philosophy  
Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Alan,

Usually (90% of the time) you can.

/scott

-----Original Message-----  
>From: Alan Fryer <N3BJ@cox.net>  
>Sent: Jan 16, 2006 6:55 PM  
>To: spr@earthlink.net  
>Subject: Re: Repair philosophy  
>  
>Scott  
>  
>Can you check the resistors without lifting them from the circuit ?  
>  
>Alan, N3BJ  
>  
>----- Original Message -----  
>From: <spr@earthlink.net>  
>To: "Old Tube Radios" <boatanchors@theporch.com>  
>Sent: Monday, January 16, 2006 4:54 PM  
>Subject: Repair philosophy

>  
>  
>> Folks,  
>>  
>> Here's how I do it. When first I get an old radio, I fix the line cord  
>well enough not to burn anything down. Then I pull the rectifier tube and  
>bring it up on a Variac, watching the AC line current. It should draw about  
>half the rated wattage and everything that's supposed to light up ought to  
>glow. The I turn the voltage down, reinstall the rectifier, gradually bring  
>the AC voltage aback up-starting at about 60V so the rectifier can conduct a  
>little. and see if I can get a signal through it.  
>>  
>> If I can, I then proceed to a full paper cap replacement and resistor  
>checking and replacement as needed. I also test the tubes.  
>>  
>> If I can't, I do the same soldering, but it's nice to know that it sort of  
>worked to start with. That way, if it doesn't work when I'm done, I'm  
>looking for my error, not for another kind of problem.  
>>  
>> This works well for me.  
>>  
>> Regards,  
>>  
>> Scott Robinson  
>>  
>> -----Original Message-----  
>> >From: Tom Rauch <w8ji@contesting.com>  
>> >Sent: Jan 16, 2006 4:15 PM  
>> >To: Old Tube Radios <boatanchors@theporch.com>  
>> >Subject: Re: postage stamp mica caps-Deja-vu!  
>> >  
>> >> I do things the old fashioned way. I find the bad parts  
>> >and  
>> >> replace them as needed, rather than shotgunning.  
>> >>  
>> >> That's not the "old fashioned way," that's the way of an  
>> >expert. Experts  
>> >> are inherently lazy, and don't want to do any more work  
>> >than necessary.  
>> >  
>> >The problem with shot-gunning is you never know if you  
>> >really replaced the bad part, or if you bumped a wire or did  
>> >something to accidentally correct a problem.  
>> >  
>> >When I had an electronics repair business, the people who  
>> >had the most callbacks were the people who refused to check  
>> >things and just threw parts at a problem. That's actually  
>> >statistically true.

```
>> >
>> >Now I'm not saying a recap is a bad thing, only that I like
>> >to know what was really wrong. That's 99% of the fun for me.
>> >
>> >73 Tom
>> >
>>
>>
>>
>> --
>> No virus found in this incoming message.
>> Checked by AVG Free Edition.
>> Version: 7.1.371 / Virus Database: 267.14.18/230 - Release Date: 1/14/2006
>>
>>
>
>
>
>--
>No virus found in this outgoing message.
>Checked by AVG Free Edition.
>Version: 7.1.371 / Virus Database: 267.14.18/230 - Release Date: 1/14/2006
>
```

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-----
From: "Joe Curry" <jjcurry@sbcglobal.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: RE: Flat Metal Strap, Circular?
Date: Mon, 16 Jan 2006 17:04:08 -0800
Message-ID: <005501c61b01$ec07f6e0$220110ac@latitude610>
MIME-Version: 1.0
Content-Type: text/plain;
    charset="us-ascii"
Content-Transfer-Encoding: 7bit
```

David:

You might try this one as well. By the way, they have the variable caps to go with them.

<http://www.cardwellcondenser.com/PAGES/md04.html>

73,  
Joe  
K3IC0

-----Original Message-----

From: David Stinson [mailto:[arc5@ix.netcom.com](mailto:arc5@ix.netcom.com)]

Sent: Sunday, January 15, 2006 12:30  
To: Old Tube Radios  
Subject: Flat Metal Strap, Circular?

Can flat metal strap, circular in shape, like this:

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=6594914663>

still be found somewhere?

-----  
From: Henry van Cleef <vancleef@eskimo.com>  
Message-Id: <200601170317.TAA25375@eskimo.com>  
Subject: Re: Repair philosophy  
To: Old Tube Radios <boatanchors@theporch.com>  
Date: Mon, 16 Jan 2006 20:17:32 -0700 (MST)  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

I'm a bit dismayed at some of this jazz about "shotgunning."

Back around 1950, I recall encountering a 1941 Cadillac car radio that would go dead in the car, intermittently. Indeed, that wasn't really "intermittent." It would play for a few minutes, then die, with almost no audio output.

Pulled it out of the car, pulled out the schematic for it, put it on the bench, and hooked it up. Some prodding around with a VTVM suggested that maybe the coupling cap to the output tubes had seen better days, and both AVC and initial bias on the RF/IF tubes was not where it should have been, nor was screen voltage. But the set played by the hour on the bench.

So I replaced the coupling cap to the audio output, replaced the burned bias resistor, found a couple of leaking screen bypasses, so replaced them, and replaced the drifted-high resistors in the IF cathodes, replaced the leaking AVC cap, and played that set on the bench every day for a week before putting it back in the car.

Back in the car, it played long enough for the owner to drive away, but he was back next day. So I tried another oscillator/mixer tube. That didn't fix it.

So, back on the bench. 100% replacement of all the caps I hadn't replaced, and a check of every resistor in the set. Can't remember how many of those got replaced, but there was an awful lot of "new" in

that 10-year-old radio.

Result: Playing radio, and happy customer. And a "file away for the future" that any more Delco radios that were intermittent might be candidates for "do them all."

Some years later, I purposely repeated the exercise with a 1941 Buick radio that was in a car that I owned. At the time, I was working for Tektronix, so had a bench full of good test equipment. But I never did pinpoint the bad cap; all I can say is the symptoms were consistent with low screen voltage, and they went away after I did a full cap replacement. I was never able to "trick" the radio into going dead on the bench with high or low A+, heat, or anything else, but all I had to do was put it in the car and it would conk out in minutes.

Fast forward another 40 years. I had a big 1949 Magnavox console that would drop out on occasion, and finally went completely dead. A few minutes on the bench showed that the input RF screen had nothing on it, so out came the bypass cap. Still nothing. The resistor had gone from about 2K to 2Meg. A good walk through with a VTVM said every wax paper condenser in the set was leaking, and most of the resistors were way out of tolerance. So I did a complete redo. I mean how many resistors are you going to leave in when you could only check about 2/3rds of them in-circuit, and most of those were way out of tolerance? One interesting thing I found, under an audio bypass cap on the power supply/audio chassis, was a connection that had never been soldered at the factory. That radio, reassembled and properly aligned (the FM circuits were woefully "off"), and it is still producing that "good old console sound" 13-14 years later.

Right after that, I tangled with an RME-45, which is a very long story, in that I went through it, removed the mods somebody had made to the detector circuit, replaced the bad audio coupling cap, and bias and grid-leak resistors on the output tube, and got it playing. It simply would not align on band 5, was poor on some of the others, but very clearly had a power transformer that was in trouble as well. The replacement transformer I got was a 750 VCT rather than a 650 VCT, so I had some engineering work to do (change to a choke-input filter). It was clear the coil box had to come out---the alignment problems turned out to be leaky oscillator padders. So that set got completely disassembled into a big Heathkit project, and I spent nearly a week with a Q-meter getting the coils and IF transformers straightened out.

I did take the opportunity to put in a hotter RF amplifier and oscillator/mixer tube, and installed 68 ohm squeal stoppers on various grids, and the set as I built it back up isn't the RME-45 that RME built in 1945, but I am going to tell you that it is the hottest

RME-45 you'll find anywhere, wide awake on 10 meters, and the coilsets track perfectly on all 6 bands. I had parasitic problems with it, traced to a very long wire in the crystal filter circuit AVC line; a .01 cap in the right place solved that.

Right now I have an RME-69 with a burned out power transformer, and it is going to get pretty close to the same treatment. I have to disassemble a lot of it to get the filter caps (shorted) out---it looks as though the dog-bone resistors are OK, but every wax paper condenser in the set leaks like a seive.

And I think of the stack of H-P audio oscillators I had---every one of them needed the resistors and postage stamp caps in the oscillator replaced, to the point that I simply build the circuit up on new terminal strips (original did not use them) and install them, and working oscillator, le voila. And all of the unstable HP 411 voltmeters, which you could scope all day, ended up needing the power supply small caps and resistors replaced to make them stable.

In summary, experience has shown me that if my probing around with an HP 412A VTVM (very sensitive ohmmeter) shows me a bunch of leaky caps and out-of-tolerance resistors, it's rebuild time. Lots of work, and you're bringing up "new manufacture" when done, but that beats hours of frittering and fussing around and having to go back into the chassis in six months or a year to trouble-shoot and replace a bunch more sick components in a 50-60 year-old box.

Hank

--

Hank van Cleef (vancleef@eskimo.com, hvanclee@nyx.net)  
1986 420SEL "A stranger in paradise" (Fremont Co. Wyoming)  
1986 GMC 1500 6.2 diesel pickup "Seen one, seen them all"

-----  
Message-ID: <001c01c61b16\$0826d170\$f5e47443@KB6NAX>  
From: "Arden Allen" <gumbear@pacbell.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: postage stamp mica caps-Deja-vu!  
Date: Mon, 16 Jan 2006 19:23:17 -0800  
MIME-Version: 1.0  
Content-Type: text/plain;  
        charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

> The problem with shot-gunning is you never know if you  
> really replaced the bad part, or if you bumped a wire or did  
> something to accidentally correct a problem.



>  
> When I had an electronics repair business, the people who  
> had the most callbacks were the people who refused to check  
> things and just threw parts at a problem. That's actually  
> statistically true.  
>  
> Now I'm not saying a recap is a bad thing, only that I like  
> to know what was really wrong. That's 99% of the fun for me.

You are absolutely correct, Tom. Not only does shotgunning waste time and resources, it produces new problems. It keeps the practioner from becoming an "expert." The "tribal knowledge" method, i.e., "quick-and-dirty" in other parlances, is the political response method to please an incompetent boss. It's the method favored by profit over all things businesses and contributes heavily to the dunning down of the work force. Historically, it's the main reason America has so much trouble competing in quality with other countries. The same psycholgy is pervading our educational system and we are now seeing the results: Test scores over training...

Arden Allen  
KB6NAX

-----  
Message-ID: <003601c61b18\$0b200250\$f5e47443@KB6NAX>  
From: "Arden Allen" <gumbear@pacbell.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Repair philosophy  
Date: Mon, 16 Jan 2006 19:42:24 -0800  
MIME-Version: 1.0  
Content-Type: text/plain;  
        charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Marty protests:

> Scott that's where we philosophically diverge. ....

The old saw, "don't fix it if it ain't busted," applies here. The less messing with a freshly acquired project radio, the better, if you don't mind me saying so. I'm more in Scott's camp. I give a radio a close visual examination, looking for trouble but not fixing anything yet. If the cord is shot I chop it off and attach a temporary cord for testing. I either pull the rectifier tube as Scott does, or check for shorted filter cap(s) before applying juice. For the initial power-up test (bringing up the variac slowly) the ammeter on my variac tells me all I want to know, and my multimeter monitoring B+ confirms it. After clearing the smoke test hurdle I like to see if the radio still plays too! If it plays I begin checking voltages so I can head off any problems with leaky caps, etc., before things

go down hill from there.

Results may vary so be careful trying it at home :-)

Arden Allen  
KB6NAX

-----  
Date: Tue, 17 Jan 2006 03:41:01 -0600  
From: David Stinson <arc5@ix.netcom.com>  
Subject: Re: Repair philosophy  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: Old Tube Radios <boatanchors@theporch.com>  
Message-id: <43CCBBAD.2000707@ix.netcom.com>  
MIME-version: 1.0  
Content-type: text/plain; charset=us-ascii; format=flowed  
Content-transfer-encoding: 7bit

With my military boatanchors, my philosophy has evolved over time. When it's an uncommon or rare set, preservation trumps operation. I recapped one of my Aircraft Radio Corp. 1939 RAT receivers (less than ten of this model are known to exist) and I regret it very much. I do not have the skills needed to duplicate the workmanship of the original builders. I still want to operate my radios, but preserve their original manufacture. So I found "work-arounds," accepting a reduced level of performance but gaining preservation of the radio. My other unmolested RAT receivers (there were four models and I have one of each) operate and work well, but at a reduced B+ voltage of 28 volts vs. the original 240 volts. I replace a cap or resistor (by disconnecting one end and tacking in a replacement) only if it's shorted or so far off as to prevent any level of operation. I've only had to do that once in each of two radios. Other "work arounds" I've used include unsoldering a bad part, tucking it back and "tacking" a good one in its place, thereby preserving the possibility of restoring it to original, and soldering a parallel resistor across one that's drifted high so that together, they make the correct value.

Leakage currents in any bad caps drop to small levels. Screen resistors that would normally burn up don't even get warm. "Wrong" bias voltages and etc. do no damage because of the reduced current flows. I make up for low audio output with an external, amplified speaker, which you can find dirt cheap at any used computer outlet store

or "thrift shop."

The receivers work fine, they run cooler and stabilize faster. I've done this with a couple of regular boatanchor receivers, with varying success. In one experiment, I used an external B+ supply to determine just how little voltage would work in different stages. I built a voltage divider to provide +45 volts to some stages, +25 to others and it worked well.

I have a WWII Japanese receiver with an open output transformer primary. There is a gentleman that will rewind these, but I'm afraid of doing damage to the irreplaceable original parts in the set while trying to get it out. There is no room inside for tacking-in a sub, so I tapped off the audio output grid and ran it to an external, battery operated audio amp. The set plays well now and I haven't had to damage any of the original wiring or destroy any of the original parts.

This isn't a "cure-all," of course; a screen resistor will burn-up on 28 volts, same as 280 volts if the bypass is dead shorted, but it will do it a lot more slowly and give you the chance to find it without "letting the smoke out." If the grid coupling cap is near-short, the audio output grid is going to go positive and the output amp will misbehave, but at 30 or 40 volts, the tube plate probably isn't going to glow red and the audio output transformer primary is probably going to be OK, giving you the chance to find the bad part without roasting your transformers.

BTW: I've heard all the arguments about how running tubes under rated B+ somehow does them harm.

Frankly, I don't buy that and if I did- receiver tubes are plentiful and relatively cheap. Rare receivers and the original components in them are not.

One of these days I'd like to puzzle-out how to do this with more complicated receivers like a Drake R-4B. I think reduced voltages will lead to much longer life in just about any tube set. We'll see.

73 Dave S.

-----  
From: listtown@nanniandjack.com (Mail List Owner)  
To: Old Tube Radios <boatanchors@theporch.com>

Subject: ADMINISTRIVIA: Changing Email Addresses

Date: Tue, 17 Jan 2006 11:15:00 -0800 (PST)

Message-Id: <20060117191500.8DD371403C@osr506.nanniandjack.com>

Gang-

This periodic post is intended to help subscribers whose email address has changed, preventing posting or receipt of the list.

If you change ISP (InterNet Service Provider), simply send me an email advising the change, and I will do my best to implement the change quickly.

For those unfortunates, whose ISP has made a change without advising their customers of the potential impact of that change on subscribers to email lists like the boatanchors, where one must be a subscriber to post to the list, try to follow along...

Under some circumstances, the changes to your email address are "transparent" to you, but prevent posting. I get error notification for these kinds of problems, and I try to work them out. However, I may miss one, and on this end, the process is anything BUT automatic.

You have a bigger stick than I do. You and your ISP have the primary responsibility to repair the problems caused by the change at the ISP. I have zero leverage with your ISP, and you have great leverage.

Most ISP maintain a customer service department to help with problems like these. This should be your first line of support for email problems. I am happy to assist and consult, but try to understand that when your ISP makes a change to their email handler, and that change prevents you from posting to the boatanchors list, I can help, but resolving this problem is your responsibility, working with your ISP. I am but a volunteer, contributing my time to administer the list.

Thank you for your attention.

--

73

Jack, W4KH/Mobile - - - BoatAnchor Mailing List Archiver/Owner - - -  
listtown@nanniandjack.com - "Plus ca change, plus c'est la meme chose"  
"Il n'y a que les idiots qui ne changent jamais d'idee"

Tue Jan 17 11:15:00 PST 2006

-----  
From: wb3fau@att.net

To: Old Tube Radios <boatanchors@theporch.com>

Subject: update on RCA 7K1-

Date: Tue, 17 Jan 2006 19:25:01 +0000

Message-Id:

<011720061925.18837.43CD448C0005DAEC0000499521602807489A0E00CC0D99@att.net>

having some past experience with "hidden components" inside IF cans, I saw there were 2 resistors connected to secondary of the 2nd IF transformer. These of course, mounted inside the can, their values 56k and 220k, both had increased to 66k and 280k, so they got changed. This got us a lot more recovered audio, but still considerable bass distortion. making progress, but will continue the search- Russ wb3fau

-----  
Message-ID: <9517627.1137523293866.JavaMail.root@elwamui-karabash.atl.sa.earthlink.net>

Date: Tue, 17 Jan 2006 10:41:33 -0800 (GMT-08:00)

From: spr@earthlink.net

To: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: Repair philosophy

Cc: Old Tube Radios <boatanchors@theporch.com>

Mime-Version: 1.0

Content-Type: text/plain; charset=us-ascii

Content-Transfer-Encoding: 7bit

David,

Your method is just fine, and is a good preservation method.

However, I do electronic design for a living, and so I balance the preservation aspect in this way: by doing a full electronic restoration, I am honoring the cleverness and thought that went into the original design. This is another kind of preservation, with a different focus.

Peace,

Scott

-----Original Message-----

>From: David Stinson <arc5@ix.netcom.com>

>Sent: Jan 17, 2006 1:41 AM

>To: Old Tube Radios <boatanchors@theporch.com>

>Cc: Old Tube Radios <boatanchors@theporch.com>

>Subject: Re: Repair philosophy

>

>With my military boatanchors, my philosophy has evolved over time.

>When it's an uncommon or rare set, preservation trumps operation.  
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>(there were four models and I have one of each)  
>operate and work well,  
>but at a reduced B+ voltage of 28 volts vs. the original 240 volts.  
>I replace a cap or resistor (by disconnecting one end  
>and tacking in a replacement) only if it's shorted  
>or so far off as to prevent any level of operation.  
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>tucking it back and "tacking" a good one in its place,  
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>and soldering a parallel resistor across one that's  
>drifted high so that together, they make the correct value.  
>  
>Leakage currents in any bad caps drop to small levels.  
>Screen resistors that would normally burn up don't even get warm.  
>"Wrong" bias voltages and etc. do no damage because of the  
>reduced current flows.  
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>which you can find dirt cheap at any used computer outlet store  
>or "thrift shop."  
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>I used an external B+ supply to determine just how little voltage  
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>divider to provide +45 volts to some stages,  
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>I have a WWII Japanese receiver with an  
>open output transformer primary. There is a gentleman  
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>This isn't a "cure-all," of course; a screen resistor will  
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>dead shorted, but it will do it a lot more slowly and  
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>the audio output grid is going to go positive and  
>the output amp will misbehave, but at 30 or 40 volts,  
>the tube plate probably isn't going to glow red  
>and the audio output transformer primary is probably  
>going to be OK, giving you the chance to find the bad  
>part without roasting your transformers.  
>BTW: I've heard all the arguments about how running  
>tubes under rated B+ somehow does them harm.  
>Frankly, I don't buy that and if I did-  
>receiver tubes are plentiful and relatively cheap.  
>Rare receivers and the original components  
>in them are not.  
>  
>One of these days I'd like to puzzle-out how to do this  
>with more complicated receivers like a Drake R-4B.  
>I think reduced voltages will lead to much longer life  
>in just about any tube set.  
>We'll see.  
>  
>73 Dave S.  
>

-----  
Message-Id: <5.2.0.9.2.20060117183034.00c41e90@mail.voyager.net>  
Date: Tue, 17 Jan 2006 18:31:08 -0500  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Kim Herron <kherron@voyager.net>  
Subject: Re: update on RCA 7K1-  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

Hi Russ

>having some past experience with "hidden components" inside IF cans, I  
>saw there were 2  
>resistors connected to secondary of the 2nd IF transformer. These  
>of course, mounted  
>inside the can, their values 56k and 220k, both had increased to 66k  
>and 280k, so they got  
>changed. This got us a lot more recovered audio, but still  
>considerable bass distortion.  
>making progress, but will continue the search- Russ wb3fau

Look for a gassy tube. They don't always show up on the tube tester.

>-----  
>This message scanned for viruses by CoreComm

Thanks!!

Kim Herron W8ZV  
1-616-677-3706  
Outgoing mail scanned for virus and worms  
with McAfee Virus Scan

-----  
Message-ID: <4767890.1137539177684.JavaMail.root@elwamui-  
karabash.atl.sa.earthlink.net>  
Date: Tue, 17 Jan 2006 18:06:17 -0500 (EST)  
From: spr@earthlink.net  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: update on RCA 7K1-  
Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Hi Russ,

Sometimes there are bypass caps lurking inside the IT transformer cans, too. A Midwest chassis I fixed was smoking the feed resistor into the can, because the B+ bypass cap was dead shorted.

About your distortion: check the value of the diode load resistor. If it has aged up, the maximum negative modulation before clipping will decrease. Also of course (but you've already done this) replace the coupling cap into the output tube.

Regards,

Scott

-----Original Message-----  
>From: wb3fau@att.net  
>Sent: Jan 17, 2006 2:25 PM  
>To: Old Tube Radios <boatanchors@theporch.com>  
>Subject: update on RCA 7K1-  
>  
>



>having some past experience with "hidden components" inside IF cans, I saw there were 2  
>resistors connected to secondary of the 2nd IF transformer. These of course, mounted  
>inside the can, their values 56k and 220k, both had increased to 66k and 280k, so they got  
>changed. This got us a lot more recovered audio, but still considerable bass distortion.  
>making progress, but will continue the search- Russ wb3fau  
>

-----  
Message-ID: <002501c61bd4\$5c6a87e0\$f0e47443@KB6NAX>  
From: "Arden Allen" <gumbear@pacbell.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Repair philosophy  
Date: Tue, 17 Jan 2006 18:10:24 -0800  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

> I'm a bit dismayed at some of this jazz about "shotgunning." ...

Why so, Hank? There's more than one way to skin a cat. My own point of view may be somewhat oblique to the conventional wisdom (is there such a thing?) because I frequently find myself talking people out the recipe approach to electronics and encouraging them to take their time and learn something as they go. Some appreciate the advice and some are too impatient or are disinterested in learning more than is necessary to get by. It's a hobby and in order to enjoy it each of us has to find our own way to happiness in it.

The examples you gave are not really shotgunning if you reconsider what you wrote. You didn't make blind decisions to replace multiple parts without attempting to determine the condition of each. You made a conscious decision to avoid wasted time and effort at doing something you are already competent at doing. Instead you invested your effort into understanding and remedying design and manufacturing shortcomings. For some of us many problems are first and last opportunities and they can either be a fun filled adventure or a laborious task. I'm sometimes glad I'm as dumb as I am at many things, it's fun to learn something new.

Arden Allen  
KB6NAX

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End of BOATANCHORS Digest 3882  
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